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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,637	02/15/2001	Heinz-Jurgen Bachelier	ESN-38	5572

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EXAMINER

COOLEY, CHARLES E

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/784,637	BACHELIER ET AL.	
	Examiner	Art Unit	
	Charles E. Cooley	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,5,6,9-11,14-20,22 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-19,22 and 25-31 is/are allowed.
- 6) ☒ Claim(s) 2,5,6,9-11,14,20 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 27 and 30 are objected to because of the following informalities:
 - a. In line 4, the "liquid substance" lacks proper basis but for the record is considered equivalent to the recited "free-flowing substance".

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2, 5, 6, 9, 10, 11, 14, 20, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Cadeo (US 4,786,183).

The patent to Cadeo discloses a homoqenizer comprising a rotor 2 intended for processing material in a surrounding housing (e.g., a housing 28-30 as seen in Fig. 5); the rotor 2 being mounted for rotation in such a housing; a drive device 14 or 20 coupled to rotate the rotor 2; a rotatable element 1 coupled to the drive device 14 and mounted for rotation in the housing, the rotatable element 1 driven for rotation independently of the rotor; the rotatable element 1 being constructed as an impeller 1

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with a plurality of pump buckets (the curved vanes denoted by 1 in Figure 2 and as clearly seen in Figures 3 and 4 are deemed equivalent to the recited "pump buckets" especially in view of the impeller 1 being described as a "pump impeller" – col. 2, lines 30-35 of Cadeo); two coaxial drive shafts 3, 10 coupled with the rotatable element 1 and the rotor 2 to drive the rotatable element or the rotor; wherein at least one 10 of the two drive shafts 3, 10 is constructed as a hollow shaft 10; wherein the rotatable element 1 can be driven in the same direction as or opposite to the rotor (col. 2, lines 33-35); wherein at least one of the rotor 2 and the rotatable element 1 has a base plate (the plate or hub which attaches the impeller to the respective shaft as seen in Figure 2) which is coupled with the corresponding drive shaft 3 or 10, the rotational axes of the drive shafts are positioned essentially vertically in operation (Figs. 1-4), and the drive shafts are each driven by a belt 15 or 22; wherein respective drive motors 20, 21 are operable to rotate the respective drive shafts 3, 10; the drive motors 20, 21 being inherently capable of being controlled (note claims 10 and 11 are devoid of any structure to accomplish the recited functions and the examiner takes the reasonable position that the drive motors 20, 21 of Cadeo are inherently controllable by well known means known to those skilled in the art to alter the rotational speed and/or direction of rotation of the motors as is common in the motor control art - note also col. 4, lines 10-14 which suggests the speed of the rotors 1 and 2 can be chosen as desired which mandates the speed of the drive motors be varied) such that the rotor and the rotatable element can be rotated at adjustable relative speeds in the same or opposite directions (col. 3, lines 18-25); the rotatable element 1 being driven in the opposite direction to the

rotor 2 (col. 3, lines 7-25). Regarding the amendatory language added to claims 5 and 10 and appearing in new claim 32, the rotatable element 1 and rotor 2 are arranged relative to each other to provide a shearing gap therebetween as seen in Figs. 1-2 and as explained in the remarks below.

4. Claim 32 is rejected under 35 U.S.C. 102(e) as being anticipated by Muntener (USP 6,227,698).

Muntener (USP 6,227,698) discloses in Fig. 3 a rotor 221 mounted for rotation in a housing 1; a drive device 401 coupled to rotate the rotor 221; a rotatable element 204 coupled to the drive device 401 and mounted for rotation in the housing; the rotatable element 204 driven for rotation independently of the rotor 221 (col. 6, lines 50-58 and col. 9, lines 39-50); respective drive motors coupled to the rotor and the rotatable element, the drive motors being controlled via speed controls such that the rotor and the rotatable element can be rotated at adjustable relative speeds in the same or opposite directions, or such that either the rotor or the rotatable element is driven while the other component stands still (col. 6, lines 50-58 and col. 9, lines 39-50); wherein the rotatable element 204 and the rotor 221 are arranged relative to each other such that a shearing force is applied to the free-flowing substance passing between the rotatable element and the rotor, a magnitude of the shearing force being dependent upon the relative speed of the rotatable element and the rotor (col. 1, line 60 through col. 2, line 39 and col. 6, lines 59-61 which references Fig. 5 disclosed at col. 8, lines 40-65 and col. 7, lines 50-55 which all disclose the shearing force generated by the device of Muntener).

Allowable Subject Matter

5. Claims 15-19, 22, 25, 26, 27, 28, 29, 30, and 31 are allowed since the objected to claims were placed into independent form.

Response to Arguments

6. Applicant's arguments filed 15 JUL 2004 have been fully considered but they are not persuasive.

7. Applicant's arguments with respect to newly presented claim 32 have been considered but are moot in view of the new ground(s) of rejection.

Applicant is reminded that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Turning to the rejection of the claims under 35 U.S.C. § 102(b), it is noted that the terminology in a pending application's claims is to be given its broadest reasonable interpretation (*In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)) and limitations from a pending application's specification will not be read into the claims

(*Sjolund v. Musland*, 847 F.2d 1573, 1581-82, 6 USPQ2d 2020, 2027 (Fed. Cir. 1988)). Anticipation under 35 U.S.C. § 102(b) is established only when a single prior art reference discloses, either expressly or under the principles of inherency, each and every element of a claimed invention. See *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1570, 7 USPQ2d 1057, 1064 (Fed. Cir.), cert. denied, 488 U.S. 892 (1988); *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). Moreover, anticipation by a prior art reference does not require either the inventive concept of the claimed subject matter or the recognition of properties that are inherently possessed by the prior art reference. *Verdegaal Brothers Inc. v. Union Oil Co. of California*, 814 F.2d 628, 633, 2 USPQ2d 1051, 1054 (Fed. Cir. 1987), cert. denied, 484 U.S. 827 (1987). A prior art reference anticipates the subject matter of a claim when that reference discloses each and every element set forth in the claim (*In re Paulsen*, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994) and *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990)); however, the law of anticipation does not require that the reference teach what Applicant is claiming, but only that the claims "read on" something disclosed in the reference. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984) (and overruled in part on another issue), *SRI Intel v. Matsushita Elec. Corp. Of Am.*, 775 F.2d 1107, 1118, 227 USPQ 577, 583 (Fed. Cir. 1985). Also, a reference anticipates a claim if it discloses the claimed invention such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention. See *In re*

Graves, 69 F.3d 1147, 1152, 36 USPQ2d 1697, 1701 (Fed. Cir. 1995), cert. denied, 116 S.Ct. 1362 (1996), quoting from *In re LeGrice*, 301 F.2d 929, 936, 133 USPQ 365, 372 (CCPA 1962).

With respect to the applied prior art under 35 U.S.C. § 102(b), the examiner has explicitly demonstrated how the reference discloses each and every element set forth in the claims and how the pending claims read on the disclosure of the reference, hence the rejection is considered proper.

To maintain a rejection under 35 USC 102 it is necessary that a single prior art reference disclose, either expressly or under the principles of inherency, each and every element of a claimed invention. In order to overcome the rejection under 35 USC 102, the examiner asks Applicant to show what element of the claimed invention is not shown by Cadeo.

The pith of Applicant's arguments are directed to functional, rather than structural distinctions between the claimed invention and the prior art. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danley*, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a device does." (emphasis in original) *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

The amendatory language added to claims 5 and 10 and appearing in new claim 32 via the response filed 15 JUL 2004 does not set forth any further structural features of the rotatable element and rotor and merely recites some broad recitation that they are arranged relative to each and thus hardly sets forth a "precise arrangement" as

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Applicant contends. The examiner considers said language to simply require the rotatable element and rotor to be proximate to each other so a substance being processed can pass therebetween in a gap which is of a size to influence the fluid, at least to some degree. Clearly, the device of Cadeo is intended to be immersed in fluid (as seen in Fig. 5) and the rotatable element 1 is shown arranged proximate the rotor 2 such that a small gap is formed thru which fluid can pass which gap would establish a shearing force or stress on the fluid layers in the gap (see Figs. 1-2). Note "shearing stress" is defined by *Webster's New World Dictionary* as "a force causing two contacting parts or layers to slide upon each other, in opposite directions parallel to the plane of their contact". Accordingly, as best seen in Fig. 2, any fluid layers in the gap between the counterrotating rotating element 1 and rotor 2 would inherently be subject to a shearing stress, irrespective of its strength, by virtue of the counterrotating facing surfaces constituted by the lower surface of rotatable element 1 and the upper surface of rotor 2 which surfaces would tend to impel the fluid in different directions (i.e., the layers would slide relative to each other) which would reasonably result in at least some shearing of the fluid.

The amendatory language "a magnitude of the shearing force being dependent upon the relative speed of the rotatable element and rotor" added to claims 5 and 10 and appearing in new claim 32 via the response filed 15 JUL 2004 is merely a consequence of the speeds of the rotatable element and rotor and thus utterly fails to define further structure to define over Cadeo. Note Cadeo does teach that the speed of the rotatable element and rotor can be varied which influences the velocity of the fluid

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being processed (col. 4, lined 10-14). Furthermore, this language is considered admitted prior art as explained in the Background of the Invention section of the instant specification.

The amended claims fail to recite "precisely" how the rotatable element and rotor are arranged relative to each other and as noted above the examiner is required to interpret such language broadly which, for the reasons explained above, forces the claims to fall within the grasp of the teachings, suggestions, and inherent features of the patent to Cadeo.

The patent to Muntener '698 clearly anticipates new claim 32 as explained in the rejection.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Charles" followed by a stylized flourish.

Charles E. Cooley
Primary Examiner
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28 JULY 2004